

Harsh Kachhia

2nd Year Mechatronics Engineering Student

✉ harsh.kachhia@ontariotechu.net

☎ 647-470-4182

📍 Toronto/Oshawa

🔗 harshkachhia.github.io/

EDUCATION

Mechatronics Engineering OntarioTech University

09/2020 - Present,

GPA: 3.6

Relevant Courses

- Statics/Dynamics, Solid Mechanics & Concurrent Engineering Design
- Differential Equations, Statistics & Numerical Methods
- Circuit Analysis, Electronics & Object Oriented Programming

WORK EXPERIENCE

Camp Counsellor Rexdale Community Hub

06/2021 - 09/2021,

Etobicoke, ON

Achievements/Tasks

- Facilitated workshops to educate teenagers about electrical circuits and soldering. Used Velleman Mini-kits to introduce electronics and **allow campers to make fun/educational hobbyist projects**.
- Supervised pre-planned field trips and followed established safety guidelines to minimize campers' accident and injury risks.
- **Resolved conflicts by 100%** that arose between campers utilizing the skills learned in High-Five Children Certification Training.

Fanatics Customer Service Representative Teleperformance Canada

05/2019 - 09/2019,

Toronto, ON

Achievements/Tasks

- Delivered exceptional service to customers by leveraging extensive knowledge of products and services to create positive experiences with a **95% satisfaction rate**.
- Fielded customer questions regarding available merchandise, sales, current prices and upcoming company changes. Upsold customers on orders and **increased sales by 5%**.
- Communicated with vendors regarding backorder availability, future inventory and special orders.

SKILLS

3D CAD Modelling & Simulation

SOLIDWORKS, Autodesk Inventor, AutoCAD & SketchUp

C/C++, Java & Python

HTML, CSS & JS

MATLAB

PowerPoint, Word & Excel

NI Multisim & LabVIEW

Use of Multimeter, Oscilloscope & Spectrum Analyzer

PERSONAL PROJECTS

Portfolio Website (11/2021 - Present)

- Programmed a responsive personal website to showcase the projects created. URL: harshkachhia.github.io/
- Detailed presentation of Mechanical, Electrical and Software projects and their **respective files, code & working video**.
- Uses HTML, CSS, JS & incorporates a Formspree API to send form data and Google Analytics to analyze user interaction.

Autonomous Mechanical Rickshaw (10/2021 - 11/2021)

- Designed and constructed a humanoid robot pulling a rickshaw carriage (Meccano Kit) which **incorporates a gearbox mechanism** to upscale torque from a **6V motor by 150%**.
- Modelled the parts and assembled the model in SOLIDWORKS to create an accurate motion analysis of the system.

Disc Static Simulation (10/2021 - 10/2021)

- Performed a Finite Element Analysis (FEA) of a Disc solid body in SOLIDWORKS using **varying densities of mesh**.
- Produced a report which outlines in detail the **stress, displacement and strain** on the solid body when a **150 N·m torque** is applied about the center.

SafeBox (04/2018 - 05/2018)

- Used **PICAXE microcontroller** and various sensors to build a safebox with an alarm system.
- Safebox locking mechanism incorporates a **photoelectric sensor** to detect master key (blue). Switches and gyroscope sensors were used on the system to detect lifting, translation and rotation movement.

Traffic Light Control System (03/2018 - 04/2018)

- Constructed and programmed a traffic light control system which revolves around a **PIC microcontroller**.
- Can read simulated active traffic using **IR and induction sensors** & uses this data to control traffic flow by adjusting traffic light.

LANGUAGES

English

Native or Bilingual Proficiency

Hindi

Native or Bilingual Proficiency

INTERESTS

3D Printing

Robotics

Stocks/Crypto

Video Games

Badminton

Weightlifting